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EG&G ROCKY FLATS

082394-13

INTEROFFICE CORRESPONDENCE

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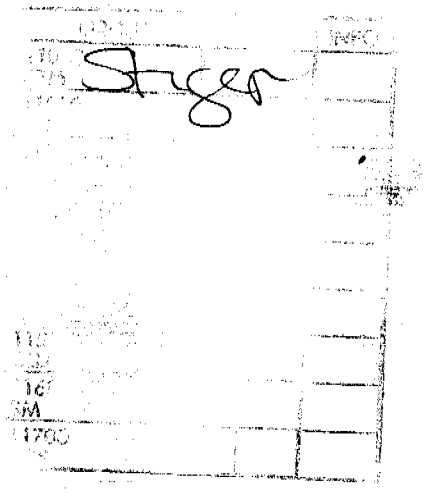
FROM: R. B. Heitland, Building Deactivations Program, Bldg. 130, X2862 RBH

SUBJECT: DEACTIVATION PLAN FOR BUILDING 707 MODULE D
RBH-022-94

Attached is a copy of the Deactivation Plan for Module D in Building 707. Your support and assistance in the development of this document is appreciated.

If you have any questions, do not hesitate to call.

Attachment:
As Stated



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1122

DEACTIVATION PLAN

FOR

BUILDING 707 MODULE D

REVISION: 0

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A. J. Holifield — Date
707 Operations Manager

_____ 8/18/94
R. W. Walker — Date
Environmental and Waste Compliance

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R. S. Badgett — Date
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D. P. Snyder — Date
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PER TELECON W/ D.P. SNYDER

2/22

Table of Contents

A22

RECORD OF REVISIONS

REVISION	DESCRIPTION	DATE
0	ORIGINAL ISSUE	8/15/94

11172

1.0 PURPOSE

Due to Rocky Flats Plant's mission change from a production facility to cleanup and environmental restoration, there is no further use or mission for the equipment in Building 707 Module D. Module D can therefore be deactivated in preparation for decontamination and decommissioning (D&D) of the module. Glovebox D-25 will be removed from the glovebox line as a pilot project for the D&D program.

The purpose of the Module D deactivation is to:

- Significantly reduce the building's baseline operating costs through the reduction or elimination of system surveillances, preventive maintenance, and corrective maintenance.
- Reduce the risk associated with the equipment and systems that were required to operate Module D.
- Prepare Module D for D&D activities.

NOTE: The scope of the D&D activities for Module D are currently under development and will follow the deactivition process. The deactivation process for Module D has been coordinated with the D&D program through the use of a deactivation End State Condition guideline (see Attachment 6). The D&D activities will be integrated into a revision of this plan or published under separate cover as they are developed.

2.0 DEACTIVATION PROCESS

2.1 Deactivation Objective

This section describes the objectives to be achieved during the deactivation of Module D equipment in Building 707. Deactivation of Module D will isolate unnecessary support equipment and systems, remove the gloveboxes from service, and isolate Zone I ventilation to the gloveboxes in Module D. The Zone I ventilation to the chainveyors, Zone II room ventilation, Selective Alpha Air Monitors (SAAM), fire suppression system, criticality detection, and Life Safety Disaster Warning system (LS/DW) will be left in service. The objectives of deactivation are:

- To minimize waste generation during the deactivation process.
- Maintain personnel exposure As Low As Reasonably Achievable (ALARA).
- Reduce associated system classification to the lowest level achievable.
- To place the gloveboxes/chainveyors in a condition that meets the established criteria of the D&D Program.(see Attachment 6)

2.2 Module D Background Information

Prior to termination of production operations, Production Module D was used as an inspection and cleaning module which included glovebox operations. Module D has enclosed chainveyor lines running the length of the module, and gloveboxes that house equipment for various inspections are tied into the enclosures at regular intervals by fire doors. Cross chainveyors link the chainveyor lines in the module with Modules E & C and Non Destructive Testing (NDT) Vaults. Module D contains 18 gloveboxes, 550 feet of ventilation ducting, 547 feet of unshielded chainveyor, and 48 feet of shielded chainveyor. Attachment 1 shows the glovebox layout in Module D.

5122

2.3 Location and Boundaries

All the activities will be performed within Building 707 Module D and the Module D Zone I Ventilation System with the exception of the S-1 chainveyor which will be sealed at the airlocks in module C. Additionally, some of the electrical or fluid service to Module D may be disconnected at their source (i.e. lighting panels, motor control centers, alarms, water headers, etc).

2.4 Existing Configuration And Deactivation Scope

The following describes the existing configuration and then the deactivation scope for the systems associated with Module D:

Gloveboxes/Chainveyors

Glovebox/Chainveyor Existing Configuration

Gloveboxes are metal enclosures that are fitted with gloves mounted on glove port openings so operators can conduct manual operations within them. They have windows of glass or plastic to provide operator viewing of glovebox activities, shielding, Zone I ventilation containment, and allow exterior lighting to be used. This system is used to protect operators from radioactive and hazardous materials which may be located inside the glovebox. A typical glovebox is shown on Attachment 2. The Final Safety Analysis Report (FSAR), Chapter 8, Accident Analysis, credits the ventilation system with ensuring that radioactive particulates in the gloveboxes are directed to the High Efficiency Particulate Air (HEPA) filter plenums where filtration occurs prior to venting to the atmosphere. The gloveboxes ensure confinement of these particulates and are Zone 1 enclosures.

The gloves are affixed to the glovebox ports and provide a seal to the glove ports of the box to allow for performing manual tasks within the glovebox structure while providing confinement barrier between the worker and the structure's contents. Gloves provided for the glove ports may be required to have lead loaded neoprene for added personnel protection.

The general configuration of the system is gloveboxes connected to chainveyors with fire doors/air locks separating the gloveboxes. This allows material to be passed from one work station to another without having material leave the confinement boundary. Gloveboxes/chainveyors are considered primary confinement and, because of their high probability for internal contamination, are designated as Zone I enclosures

A typical glovebox is connected to its exhaust system through a manual flow control damper and a HEPA filter. Each glovebox has at least one magnehelic gauge which is used to monitor the differential pressure between the glovebox and the surrounding room. A slightly negative pressure is maintained in the glovebox (Zone I) and the room atmosphere (Zone II). Manual dampers in each glovebox exhaust line are used to adjust the negative pressure as required

Criticality drains allow any liquids to drain from the glovebox to prevent an unfavorable geometric configuration if fissile material were present. The drain is maintained with a liquid seal to prevent air exchange and extends to within

6/22

inches of the floor to preclude placement of any container under the drain. The intent of the drain is to release any fissile liquid mixture to the room floor, thus maintaining a safe geometry.

Glovebox/Chainveyor Deactivation Scope

- All accountable nuclear material removed.
- Combustibles removed from gloveboxes and minimized within module D.
- All process lines blanked, shrink wrapped, sealed or capped off.
- All chemicals removed.
- All Criticality Safety Operating Limits (CSOL's) will be removed or replaced with "Exempt Fissile Material Only limits".
- All equipment and tooling in the glovebox which are not attached or oversized in relation to the glovebox opening should be removed.
- Glovebox gloves will be removed and glove ports booted, blanked off and sealed using approved sealant.
- All glovebox electrical connections will be isolated at the power source and disconnected at the glovebox and sealed using approved sealant, insulated and marked appropriately. The chainveyor electrical outlets will remain energized to support the D&D efforts.
- All glovebox penetrations sealed using approved sealant.
- Fix-it sprayed on the inside of the glovebox to bond contamination to prevent further spread of contamination.
- All windows and gaskets will be sealed using approved sealant.
- All piping to glovebox drained, disconnected at the glovebox and sealed using approved sealant and marked appropriately.

NOTE: An example of a deactivated glovebox is shown on Attachment 3.

Glovebox Dry Air System(GBDAS) Ventilation System (ZONE I)

GBDAS Existing Configuration

All gloveboxes and conveyor enclosures in Module D are supplied with air from a single pass independent air supply system. The environmental conditions (temperature/humidity) within the enclosures are the same as the surrounding Zone II conditions. The ventilation rate within the enclosures is approximately 30 air changes per hour. The GBDAS is an independent single pass system consisting of two parallel conditioning units (presently out of commission), a common filter and parallel redundant supply air fans, one operating, and one in standby, connected to a common air supply plenum. Filter plenum PL-105 (fans F-115A and F-115B) provides exhaust from the gloveboxes in Module D & E and the health physics vacuum system. This system provides low moisture content air for product quality. A diagram of the GBDA system for Module D is shown on Attachment 4.

GBDAS Deactivation Scope

The gloveboxes in Module D will be disconnected and blanked off from the ventilation exhaust headers and supply headers . The exhaust and supply lines will remain active to the module D chainveyor to assist in the D&D of the gloveboxes and chainveyor. The photo-helics will be disconnected from the supply air automatic control valves and de-energized. Software changes as required will be made to the DACS. After the D&D of Module D, E, and the NDT vault, the fans can be turned off and ventilation lines blanked off as appropriate.

7/22

Fissile materials in the glovebox exhaust systems, including ducts, difficult to access areas, and plenums, should be adequately evaluated. If possible, the material should be remediated or otherwise documented as to quantity and location.

General Dry Air System (GDAS) Ventilation System (ZONE II)

GDAS Existing Configuration

This system provides continuous recirculation of clean, conditioned low humidity air to most plutonium handling areas in Building 707, including Module D. Module D GBDAS is supplied by four conditioning units (presently out of commission). Although the conditioning units are independent , they are grouped to share common exhaust plenums. After passing through work area and a two stage HEPA filter, it is returned to the second floor, where it is drawn into the conditioning units.

GDAS Deactivation Scope

No change. Zone II ventilation in Module D will remain in service supplying normal air flow.

Glovebox Overheat (GBO) Alarm System

GBO Existing Configuration

Chainveyor Overheat Detection System, GBO-020 & 020A, are Fire Control Instruments Inc. (FCI) alarm panels which are in service to detect overheat conditions in Module D chainveyors. Module D & E Glovebox Overheat Detection System, GBO-008, is a Fenwal fire panel which monitors for overheat conditions and is presently "Out of Service". The GBO systems monitor fixed temperature detectors, which are typically rated at 190 degrees F.

GBO Deactivation Scope

Chainveyor Overheat Detection system, GBO-020 and 020A, will be de-energized and their alarms deactivated. Module D Glovebox Overheat Detection System, GBO-008, is out of service and will be totally disconnected and all of its alarms deactivated . Fire door control panels interconnected to GBO-008, GBO-019B, and GBO-020A will be rewired to maintain their function as required. The portions of the GBO-009 (FC-ID) fire detection system which were partially installed, but not activated, will also be removed.

Selective Alpha Air Monitors (SAAM)

SAAM Existing Configuration

The SAAM System provides detection of airborne radioactive contaminants to protect workers and environment. SAAMs provide continuous monitoring of the air in Module D for alpha radiation. The SAAMs have local and remote alarm capability to allow appropriate actions in the event of an alarm to minimize potential exposure to plutonium. There are 6 SAAMs in Module D.

SAAM Deactivation Scope

No change. All SAAMs for Module D will remain in service and surveillances will continue.

Health Physics Vacuum System (HPVS)

HPVS Existing Configuration

3/22

The HPVS provides house vacuum that is used with the sampling airheads and also the SAAMs. The sampling airheads record the release of airborne contamination within the RCA of the building. The sampling airheads do not alarm as the SAAMs, but will provide a record for the level of alpha contamination.

HPVS Deactivation Scope
No change. The HPVS for Module D will remain in service and surveillances will continue.

Criticality Alarm System (CAS)

CAS Existing Configuration
The CAS provides Alarms to inform operating personnel to evacuate in the event of a criticality. The system reduces radiological consequences to workers that could result from a criticality accident. This is accomplished by providing neutron detection and alarm coverage of areas in which a criticality event could occur. There is one criticality detector in Module D.

CAS Deactivation Scope
No change. The criticality detector for Module D will remain in service and surveillances will continue.

Life Safety/Disaster Warning System(LS/DW)

LS/DW Existing Configuration
The LS/DW system provides annunciation of the criticality alarms, announcing of SAAM alarms, and summoning of the BEST team members. It is also used as an emergency notification system for other building or plant emergencies and as a public address system. Warnings are identified to personnel through strategically located speakers.

LS/DW Deactivation Scope
No Change. All LS/DW speakers will remain in service and surveillances will continue.

Fire Suppression System

Fire Suppression Existing Configuration
The fire suppression system provides wet pipe sprinkler coverage to Module D, to provide the functional requirements credited in the FSAR for extinguishing fires.

Fire Suppression Deactivation Scope
No change. The fire suppression System in Module D will remain in service.

Miscellaneous Systems/Components

Miscellaneous System/ Components Existing Configuration
No description required.

Miscellaneous System/ Components Deactivation Scope

- All piping, tanks, and vessels in Module D for systems not left in service shall be drained. Piping lines should be cut and capped. Connections to the tanks and vessels should be blanked. Vents should be installed as necessary to prevent pressurization.
  The freon and trichlorethane tanks on the second floor of Building 707

11/22

that service multiple modules shall be drained and the piping in module D shall be verified as empty. The carbon tetrachloride system which sevices multiple modules shall be blanked off from module D and the piping within module D shall be verified as empty.

- Electrical services not needed for surveillance and maintenance activities shall be physically isolated from the power source, insulated and marked appropriately.
- All unattached hazardous materials shall be removed from facilities and disposed of in accordance with approved procedures.
- All hazardous and radioactive material which is attached/contained and will be removed in the D&D mode, shall be located , identified, quantified, and recorded as part of the deactivation file.
- All spare parts, tools and supplies shall be removed and excessed if it can be radiologically free released for unrestricted use.
- All debris shall be removed.
- Any chairs/ furniture shall be removed and excessed if it can be radiologically free released for unrestricted use.
- Friable asbestos, if found, shall be encapsulated but not removed.
- Final radiological status surveys shall be available on file, to include, but not limited to, process equipment, gloveboxes, and drains
- All Non-Conformance Reports and Work Control Forms requesting modifications or repairs to Module D should be reviewed and canceled as appropriate.
- The FSAR shall be reviewed and updated upon completion of D&D. The review shall account for both the deactivation and the D&D activities.
- Existing Module D equipment operating procedures, existing records, drawings, and photographs shall be available in an indexed file.
- The Optical Comparator (30" OGP) shall be radiologically surveyed and released for unrestricted use if possible.
- The Zeiss measuring equipment,located outside the gloveboxes, will be radiologically surveyed and released for unrestricted use if possible.
- The instrument air connections to the Module D gloveboxes should be removed and the system shall remain active to service other modules.
- Procedures and drawings that are no longer needed after the deactivation is completed will be cancelled and removed from distribution.
- The System Evaluation Report's and Boundary Identification Package's will be updated and issued as part of the engineering package.

2.5 Deactivation Process Procedures

Deactivation activity operations will be performed in accordance with:

- Integrated Work Control Program(IWCP)
- Configuration Change Control Program(CCCP)
- Conduct of Engineering Manual(COEM)
- Conduct Of Operations Program (COOP)
- Building Deactivation Process Guidance
- Building Deactivation Activity Control Envelope Process Guidance
- Idle Equipment Management Plan
- Associated plant procedures.
- State and Federal regulations
- Health and Safety Practices Manual

0122

2.6 Removal of Glovebox D-25 (D&D Pilot)

In support of the D&D program, glovebox D-25, including the laser, will be removed from Module D as a pilot program. Glovebox D-25 is a radiologically cold box which was never placed into service. Blanks currently exist between glovebox D-25 and the main ventilation systems and the Chainveyor system in Module D. This activity includes design and IWCP activities.

2.7 Associated Activities

Module E in Building 707 will also be deactivated, as described in Building 707 Activity BDP-707-002, "Deactivation of Module E". Since Module D and E share the same Zone I ventilation systems, deactivation of Module E must be completed prior to removing the entire Zone I ventilation system for Module D & E from service.

3.0 ENVIRONMENTAL COMPLIANCE AND WASTE MANAGEMENT

- A National Environmental Policy Act (NEPA) review will be conducted.
- An Air Pollution Emission Notice (APEN) review will be conducted.
- A management plan for materials associated with idle equipment will be transmitted to the Colorado Department of Health which includes an alternative to leave the lead shielding on the gloveboxes.
- All waste drums/containers will be removed once the module has been deactivated.
- The 90 Day Accumulation Areas will be closed as required to support the D&D.
- RCRA waste classification for the 731 tank system shall be removed.
- The product tanks, lines and organic air lines shall be verified as empty and isolated.
- All chemicals will be removed from Module D.
- The disposition of inventory product tanks, equipment reservoirs, and equipment containing oils, solvents, coolants, etc. in catch pans, drip pans, floors, etc. will be handled in accordance with the Management Plan associated with idle equipment.
- Waste generated from the deactivation of Module D will be handled in accordance with the following procedures:
  1. 5-23000-WRP-WO-1100- Solid Radioactive Waste Packaging inside the PA.
  2. 5-23000-WRP-WO-1102- Waste/Residue Traveler Instructions
  3. 1-10000-WRM-WO-4034-Radioactive Waste Packaging Requirements
  4. Building 707 Waste Stream Residue Identification and Characterization Book
  5. Building 707/778/991 Complex Waste and Environmental Compliance Guide
  6. 5-23000-WP-1201-Waste and Environmental Management System Container Inventory, Tracking and Control
  7. 1-10000-WRM-WP-1027-Non-radioactive Waste Packaging

4.0 HEALTH & SAFETY REQUIREMENTS

The Health and Safety (H&S) Requirements for the deactivation of Module D include

1/22

Industrial Hygiene, Occupational Safety and Health, Radiological Protection, and Fire Protection. These requirements are defined in existing RFETS policies and procedures and will be implemented throughout the deactivation and D&D process to ensure worker safety. These procedures include but are not limited to the Health and Safety Practices Manual, Radiological Operating Instructions, Radiological Control Manual and IWCP.

5.0 SITE USE REVIEW BOARD (SURB)

The SURB has reviewed the use for gloveboxes, chainveyors and Zone 1 confinement systems associated with the deactivation of Modules D & E in Building 707 and concluded that there is no future use identified, and the systems could be deactivated and subsequently D&D.

6.0 DEACTIVATION ORGANIZATION AND RESPONSIBILITIES

The deactivation organizations personnel responsibilities during the deactivation process are indicated in the Building Deactivation Process Guidance document 4-M44-ADM-001.

7.0 TRAINING

The existing Building 707 training and qualification program shall be adhered to for the deactivation of Module D and is adequate to support this program.

8.0 SCHEDULE

See Attachment 5 (Primavera schedule) NOTE: The maintenance portion of the schedule, pages 4-7 of the schedule are currently being developed and resource loaded.

9.0 FUNDING, COST ESTIMATE, AND COST BENEFIT

Work Package Number 13005 funding in FY94 and Work Package Number 51104 will provide funding in FY95 to support deactivation of Modules D & E. The Cost Estimate for performing this deactivation work is included in these work packages and is approximately $2M, including Modules D & E gloveboxes and chainveyors, glovebox D-25 removal, and the associated building systems directly supporting these areas. The Cost Benefit from conducting the deactivation of these areas is approximately $700K/yr in reduced surveillance and maintenance costs.

10.0 NECESSARY AND SUFFICIENT STANDARDS, AND HAZARDS ASSESSMENT

A Deactivation Activity Control Envelope (DACE) and Hazards Assessment will be conducted for the Deactivation of Module D in accordance with the Buiding DACE Process Guidance. The DACE provides an analysis of a manageable scope of work, including a definite start and finish point, a flow chart of the process steps, and a hazards

12/22

assessment. The DACE supports the timely development of complete work control documents, and provides a coherent expression of the necessary and sufficient standards applicable to the activity and the adequacy for the safe conduct of the work.

11.0 SAFEGUARDS AND SECURITY

The existing safeguards and security requirments for Building 707 will be adhered to and are adequate to support deactivation in Module D.

12.0 SAFETY ANALYSIS DOCUMENTATION

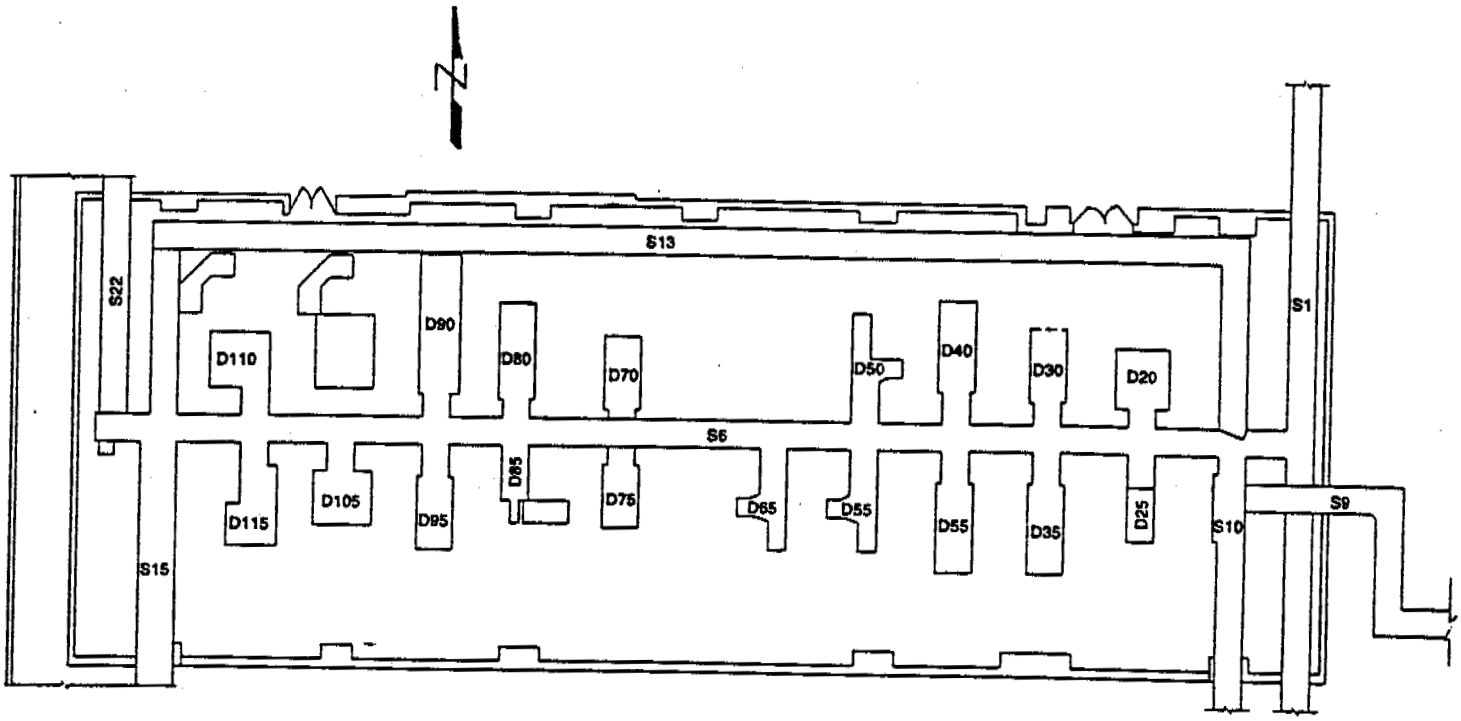
Deactivation activities in Module D will be evaluated using an Unreviewed Safety Question Determination (USQD) in accordance with procedure 1-C11-NSM-04.05. This will serve as the governing document to evaluate that these deactivation activities are bounded by the existing safety analysis in the Building 707 Final Safaty Analysis Report (FSAR). All facility baseline documents and suveillance procedures will be revised as necessary to support the deactivation process.

13.0 REFERENCES

- Building 707 Safety Evaluation Report (SER)
- Building 707 Boundary Identification Packages (BIPs)
- Building 707 Final Safety Analysis Report (FSAR)
- Drawing VSSOP-101-1, Inert & General Dry Air System
- Drawing 39411-207, Module D

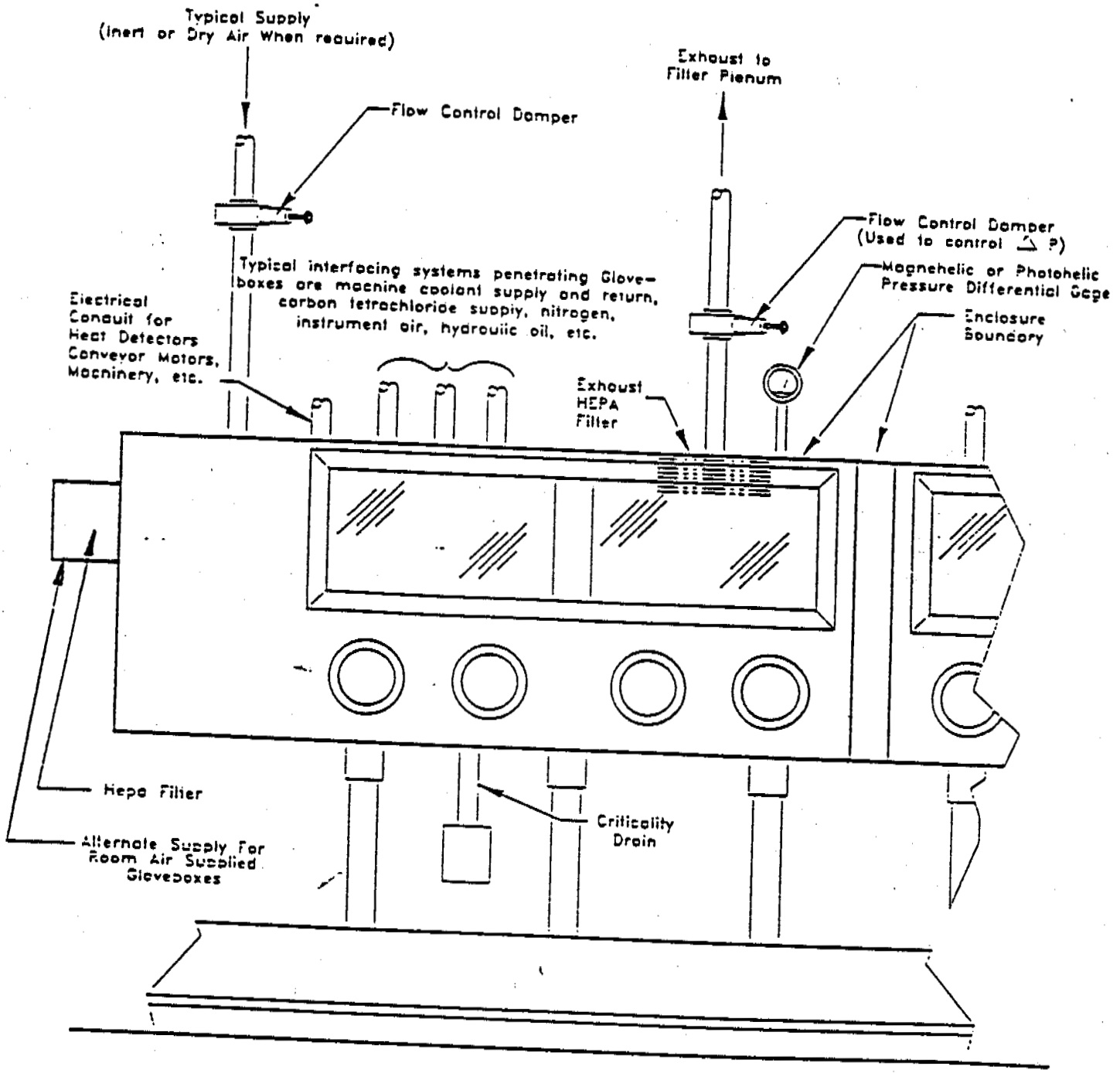
3/22

Attachment 1
Module D Glovebox Layout

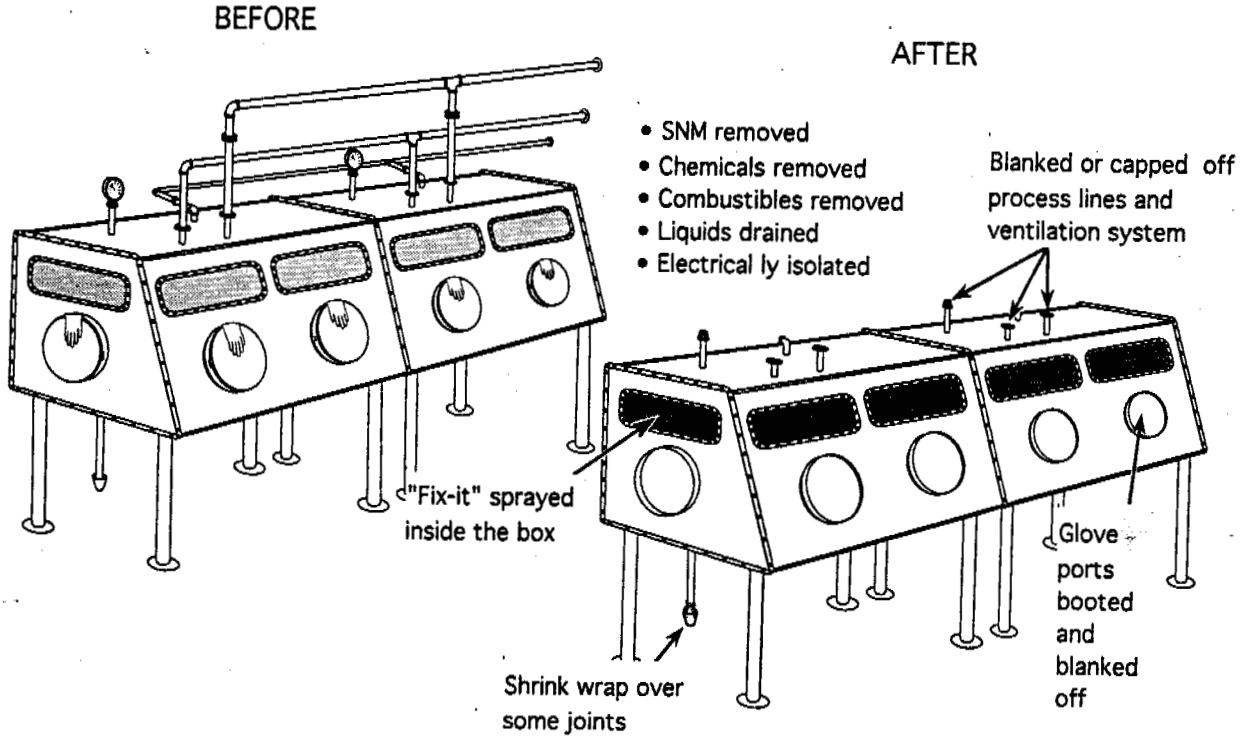


14/22

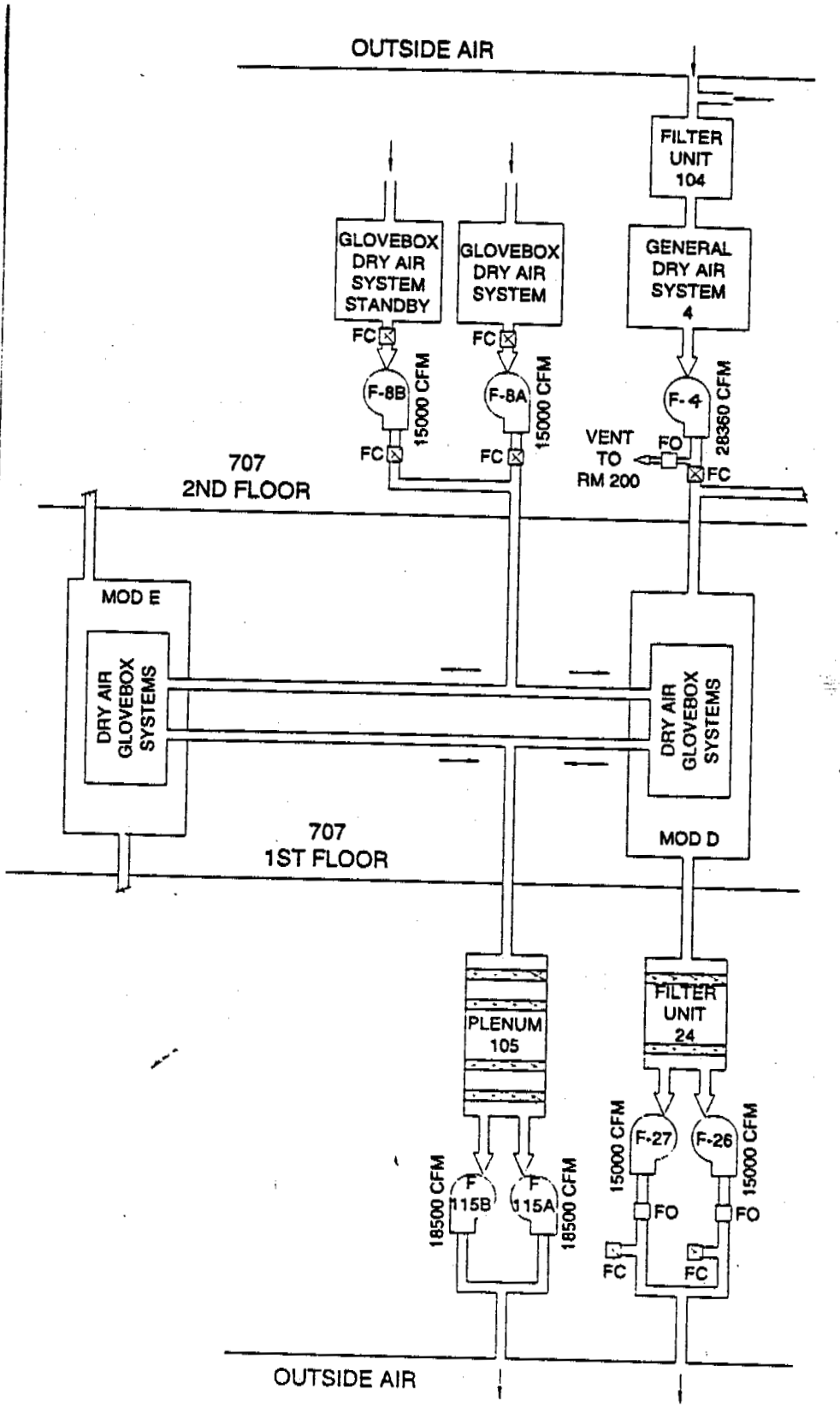
Attachment 2
Typical Glovebox



ATTACHMENT 3
Example of Deactivated Glovebox



Attachment 4
Module D Ventilation Layout



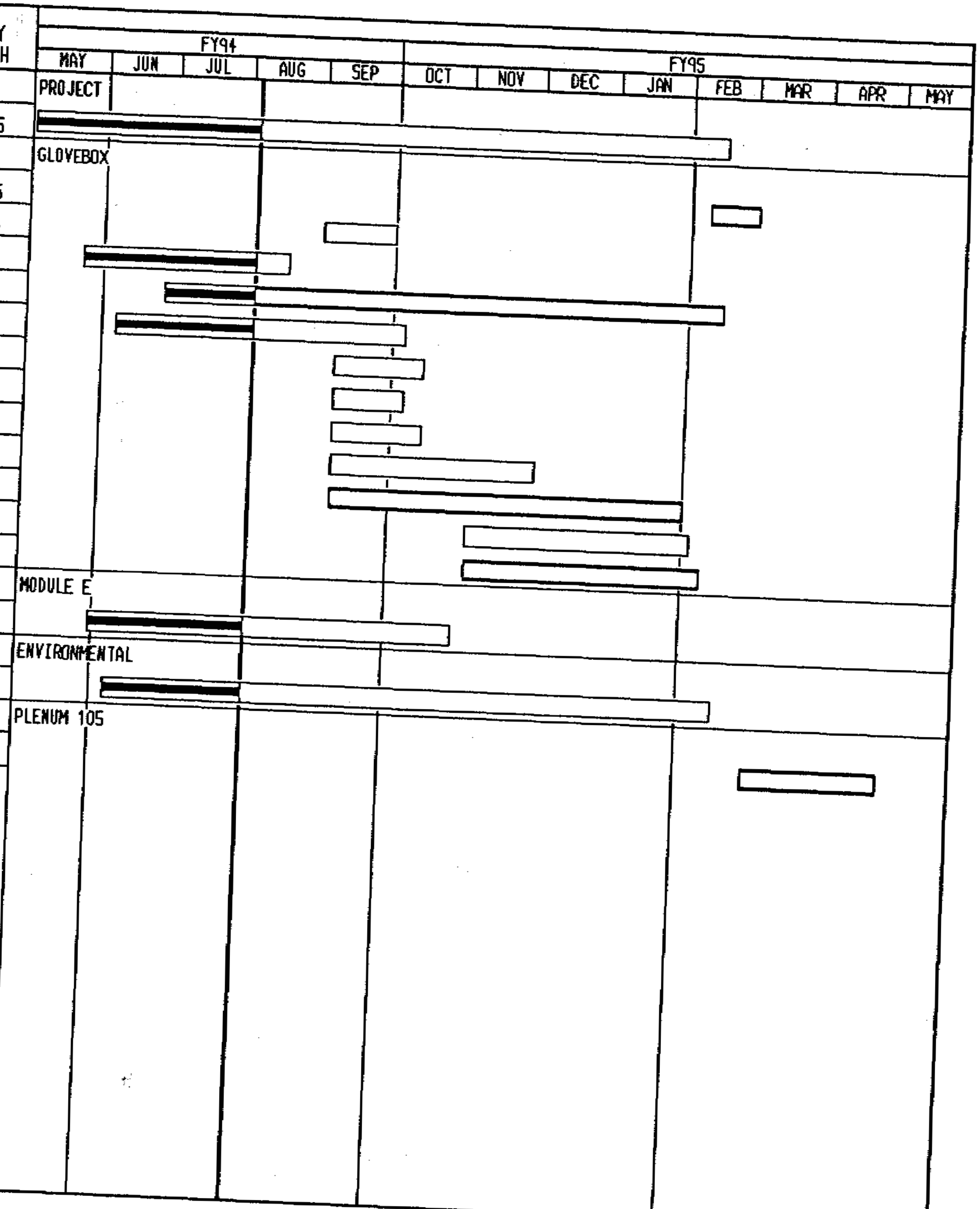
17/22

ATTACHMENT 5
Work Activity Schedule

1/6/22

17/22

TASK ID	EARLY START	EARLY FINISH
PRE-REQUISITES	2MAY94A	15FEB95
CLOSEOUT	9FEB95	1MAR95
D&D PILOT PROJECT	1SEP94	30SEP94
SAFEGUARDS MEASUREMENT	24MAY94A	17AUG94
IWCP DEVELOPMENT	27JUN94A	15FEB95
CLASSIFIED TOOLING (TP077924)	7JUN94A	5OCT94
PROCESS LINES	7SEP94	13OCT94
ALARMS	7SEP94	5OCT94
OIL SYSTEMS	7SEP94	13OCT94
RTV/FIXIT	7SEP94	30NOV94
ELECTRICAL	7SEP94	31JAN95
FILTERS	3NOV94	3FEB95
HVAC	3NOV94	8FEB95
MODULE E ACTIVITIES	31MAY94A	28OCT94
ENVIRONMENTAL ACTIVITIES	7JUN94A	15FEB95
DEACTIVATE PLENUM 105	2MAR95	26APR95



Plot Date 17AUG94
Data Date 4AUG94
Project Start 1OCT93
Project Finish 26APR95

(c) Primavera Systems, Inc.

EG&G ROCKY FLATS, INC.
BUILDING DEACTIVATION PROJECT
MODULE D SUMMARY SCHEDULE

Sheet 1 of 1

Date	Revision	Checked	Approved

ATTACHMENT 6
End State Condition Checklist

18/22

BUILDING/SYSTEM/COMPONENT DEACTIVATION FOR RELEASE TO D&D PROGRAMS - END STATE CONDITION

BUILDING/SYSTEM/COMPONENT Building 707 - Module D
(Evaluated with Anthony Tome of D&D Programs)

REQUIRED COMPLETION DATE January 1995

REVISION 1

The following is a guide for indicating the end state condition when deactivating a building, system, or component (ie. glovebox, tank, alarm, etc.). The end state condition may be achieved in multiple phases. Select the requested tasks to be performed.

APPLICABLE	N/A		
X		1.	All debris, in and around the facilities, shall be removed
X		2.	All office furniture shall be removed and excessed if it can be radiologically free released.
X		3.	All spare parts, tools, and supplies shall be removed and excessed if it can be radiologically free released.
X		4.	All equipment and tooling in the gloveboxes which are not attached or oversized in relation to the glovebox openings should be removed.
X		5.	The Final Safety Analysis Report shall be reviewed and updated for deactivation status in accordance with applicable procedures. One Final Safety Analysis evaluation shall be completed for both the planned deactivation and D&D efforts.
X		6.	Environmental and/or other applicable permits associated with the facility shall be reviewed with D&D programs to determine the status and applicability for maintaining them and responsibility for closure.
X		7.	The required environmental monitoring systems shall be identified and maintained in serviceable condition.
X		8.	Fissile materials in the glovebox exhaust systems, including ducts, untoward areas, and plenums, should be adequately evaluated. If possible, the material should be remediated or otherwise documented as to quantity and location.

19/22

APPLICABLE	N/A		
X		9.	All accountable special nuclear materials (SNM) shall be removed from the building or glovebox. All CSOL's and NMSL's shall be removed or replaced with "Exempt Fissile Material Only" limits.
X		10.	All unattached hazardous materials (i.e., lead, mercury, etc.) shall be removed from facilities and disposed of in accordance with established procedures.
X		11.	All stored radioactive and mixed waste (i.e., outside systems in containers such as barrels, drums, boxes, etc.) shall be removed from facilities and disposed of in accordance with appropriate procedures.
X		12.	All hazardous and radioactive material which is attached/contained and will be removed in the Decontamination & Decommissioning (D&D) mode, shall be located, identified, quantified, and recorded as part of the shutdown/deactivation file.
X		13.	~~All loose or damaged friable asbestos, in and around the facilities, shall be removed or encapsulated in accordance with established procedures.~~ Friable asbestos, if found, shall be encapsulated, but not removed.
	X	14.	An S&M Plan for guidance on future requirements to maintain the facility in a safe, stable condition until final decommissioning, shall be developed. The S&M plan will not be required based on the plan for the D&D activities to immediately commence after deactivation.
X		15.	All tanks, vessels, and piping shall be drained in accordance with applicable state and federal regulations. Piping lines should be cut and capped. Connections to the tanks and vessels should be blanked. Vents should be installed as necessary to prevent pressurization.
X		16.	Electrical services that are not needed for surveillance and maintenance (S&M) activities shall be physically isolated from the energy source and marked appropriately.
	X	17.	When the electrical and water supply services are to remain in place for S&M activities, the services should be in a centralized location (i.e., lighting circuits that are required for S&M), when practicable.

APPLICABLE	N/A		
X	___	18.	The building steam and condensate system shall be deactivated and isolated.
___	X	19.	All systems with flow routes to disposal sites shall be isolated by sealing or capping at the deactivated facility or system. The outlet end of the discharge pipes shall be screened if appropriate.
___	X	20.	All elevator systems shall be deactivated with documentation on file as to the type, weight, and class of fluids used in the system so as to help make them operational in the future. Also include files that relate to load certification tests and preventative maintenance information.
X	___	21.	The fire protection systems shall be reduced or eliminated as determined by Fire Protection Engineering.
X	___	22.	~~Gloveboxes shall have all penetrations sealed and the interior contamination fixed or encapsulated to assure at least a 15 year concealment life.~~ Gloveboxes shall have all penetrations sealed and the interior contamination fixed or encapsulated to assure at least a 6 month concealment life. Glovebox gloves shall be removed and replaced with boots. Penetrations shall be sealed using a sealant.
X	___	23.	~~Air supply and exhaust systems should be deactivated, sealed to the environment, and marked appropriately. Passive vent systems will be installed where required. Filters shall be added as necessary.~~ Air supply and exhaust systems should be deactivated, sealed to the environment, and marked appropriately on the gloveboxes only. The air supply and exhaust shall remain active on the chainveyors. Passive vent systems will be installed where required. Filters shall be added as necessary.
X	___	24.	The Selective Alpha Air Monitoring (SAAM) system and sampling airheads shall be reduced to the required level as identified by Radiological Engineering. Prior to removal, consideration shall be given to the D&D activities which are anticipated to start immediately following the deactivation.
X	___	25.	The criticality monitoring and alarm system shall be deactivated

2/22

APPLICABLE	N/A		
			and marked appropriately following the determination by Criticality Engineering that no nuclear criticality could occur.
___	X	26.	All appropriate facility penetrations, (i.e., louvers, pipe openings, unused vent pipes, etc.), shall be closed off to prevent animal and weather intrusions.
___	X	27.	All radiologically controlled areas shall be decontaminated and released or the contamination levels reduced or contained in accordance with Radiological Engineering's direction. Decontamination would not be appropriate since the D&D activities are anticipated to start immediately following the deactivation.
X	___	28.	All Non-Conformance Reports and Work Control Forms requesting modifications or repairs to the building/system to be deactivated should be canceled.
X	___	29.	Final radiological status surveys shall be available on file, to include, but not limited to, process equipment, gloveboxes, drains, sumps, and air handling equipment.
X	___	30.	Existing equipment operating procedures, existing records, existing drawings, photographs (if available), shall be available in an indexed file.
___	X	31.	All doors to the facilities shall be locked and access to the area controlled except for entrance by S&M crews.
___	X	32.	Other (please state) _____